

What is claimed is:

1. An illuminator including a pair of a ultraviolet light-emitting discharge tube and a white visible light-emitting discharge tube that are alternately and periodically placed in a lighted state and an unlighted state, such that a state of illumination using only one of said ultraviolet light-emitting discharge tube and said white visible light-emitting discharge tube is realized in at least part of a time domain during the period,

the illuminator comprising a hot-cathode tube used for at least one of said ultraviolet light-emitting discharge tube and said white visible light-emitting discharge tube, said hot-cathode tube being arranged in a state where a heating power supply for heating filaments, and an illuminating power supply for enabling motion of thermoelectrons within said hot-cathode tube and at the same time periodic repetition of the lighted state and unlighted state, are capable of executing and interrupting application of voltage, independently of each other.

2. The illuminator of claim 1, wherein a cold-cathode tube is employed as a discharge tube having no heating power supply arranged therein.

3. The illuminator of claim 2, wherein said cold-cathode tube is used as a backlight.

4. The illuminator of claim 1, wherein a plurality of pairs of light sources for ultraviolet light and white visible light are arranged, and a computer controls selection of a pair of light sources and periodic application of voltages from power supplies to the selected pair of light sources.